LIEBERT® SN™ INTEGRATED TEMPERATURE & HUMIDITY SENSORS
Quick-Start Guide

Description



This guide provides installation instructions for the following Liebert SN integrated sensor models:

- **SN-Z01** - Integrated cable with a single temperature sensor
- **SN-Z02** - Integrated cable with three temperature sensors
- **SN-Z03** - Integrated cable with three temperature sensors and a single humidity sensor

These sensors may be placed in any area—typically in a rack such as the Knurr Miracel® Rack—to monitor temperature and humidity levels.

What's Included

The Liebert SN is shipped with the following components:

Description	Quantity for Model:			Description	Quantity for Model:		
	SN-Z01	SN-Z02	SN-Z03		SN-Z01	SN-Z02	SN-Z03
Number and Type of Sensors:				Dual Lock™ Fastener	0.5 ft. (0.15m)	1.5 ft. (0.45m)	1.5 ft. (0.45m)
Temperature Sensors	1	3	3				
Humidity Sensors	0	0	1	Cable Tie	2	6	6
Sensor Bracket - Base	1	3	3	Alcohol Pad	1	3	3
Sensor Bracket - Support	1	3	3	Fastener 1/4 Turn High Pro	1	3	3
Screw 8-32 x 7/16	2	6	6	Quick-Start Guide	1	1	1

Installation

Installing the sensor requires mounting the sensor, connecting it to Liebert monitoring equipment and configuring sensor parameters:

- **Step 1 - Mount the Sensor** - Mount the sensor securely in the appropriate location
- **Step 2 - Connect the Sensor** - Attach the cable to the sensor port on the Liebert product
- **Step 3 - Confirm the Connection** - Acknowledge the sensor connection using the Web interface
- **Step 4 - Configure Parameters** - Assign a label, specify thresholds to trigger alarms

Step 1 Mount the Sensor

Determine where to place the sensor in the area where temperature and humidity levels are to be monitored and how to secure the sensor.

The sensor may be mounted in the Knurr rack or other types of racks. A factory-supplied bracket and several types of fasteners offer various options for rack mounting:

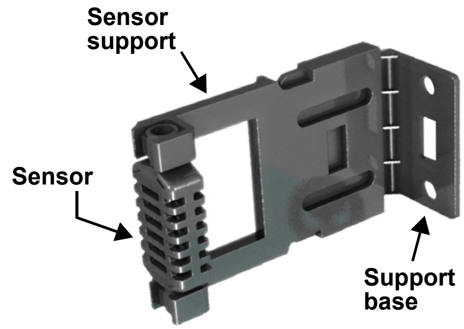
Materials Needed	Factory-Supplied	Use in:
• Bracket base & sensor support	✔	All mounting options (**Options A** - **D**)
• Quarter-turn tool-less fastener	✔	**Option A - Mount on a Knurr Rack Frame 19-Inch Rail**
• Screws *(Knurr Rack only)*	✔	**Option B - Mount the Sensor on the Rack Door**
• Cable ties *(all types of racks)*	✔	
• Dual Lock fasteners	✔	**Option C - Mount the Sensor on a Flat Surface**
• Standard panhead rack screw	Not supplied	**Option D - Mount the Sensor on the Rack Rails**

Emerson recommends mounting the sensor on the rack door or in an area within the rack where airflow is unobstructed.

Assemble the Sensor and Bracket

If using the factory-supplied bracket, follow these steps to assemble the two parts of the bracket and attach the sensor to the bracket:

- The factory-supplied bracket has two parts—the support base and the sensor support, as shown at right. Insert the support base into one end of the sensor support.
- Snap the sensor into the other end of the sensor support.



Rack Mounting Options

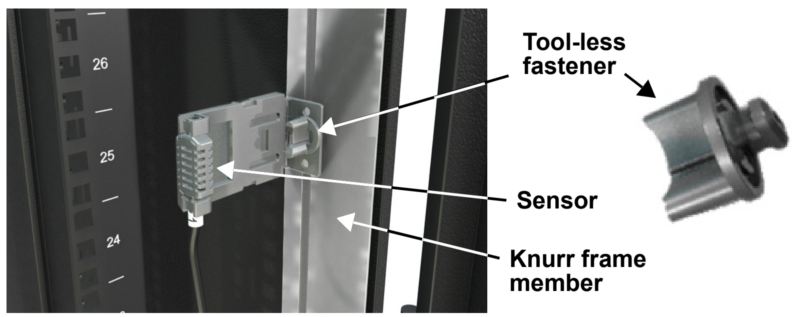
Determine where to place the sensor in the rack and use one of the following methods:

Option A Mount on a Knurr Rack Frame 19-Inch Rail

To mount the sensor on the frame or optional 19-inch rail of a Knurr rack, use the factory-supplied quarter-turn, tool-less fastener to secure the sensor and bracket to the frame or rail (see **Figure A**).

- Place the sensor in the factory-supplied bracket (see **Assemble the Sensor and Bracket**).
- Insert the quarter-turn tool-less fastener through the slots in the sensor support or the base of the assembled bracket to mount the sensor on the rack frame or optional 19-inch rails.
- As the name signifies, the quarter-turn fastener requires only a 1/4 turn clockwise to fasten the sensor securely in place.

Figure A Sensor mounted on Knurr rack frame



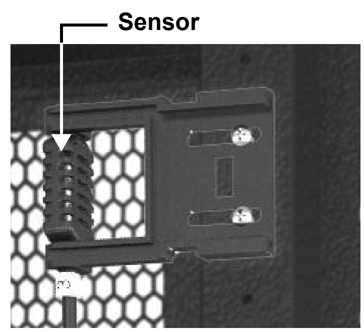
Option B Mount the Sensor on the Rack Door

To mount the sensor on a rack door, use the factory-supplied screws (Knurr rack only) or cable ties (all types of racks) to secure the sensor and bracket to the door (see **Figure B**).

- Place the sensor in the factory-supplied bracket (see **Assemble the Sensor and Bracket**).
- *For Knurr racks:*
  - Use the factory-supplied screws or cable ties to mount the sensor and bracket on the rack door.

    If the door has a slot similar to the one on the Knurr rack frame member (see **Option A**), you can attach the sensor support bracket by inserting the quarter-turn tool-less fastener through the center slot in the bracket.
- *For other types of racks:*
  - Use the factory-supplied cable ties to mount the sensor and bracket on the rack door. (The bracket is not necessary if the sensor is mounted on the door's perforated holes using cable ties.)

Figure B Sensor mounted on rack door



Option C Mount the Sensor on a Flat Surface

To mount the sensor on a flat surface in any rack:

- Place the sensor in the factory-supplied bracket (see **Assemble the Sensor and Bracket**).
- Use the provided alcohol pads to clean the rack surface and bracket prior to affixing the factory-supplied Dual Lock fasteners.
- Use the Dual Lock fasteners to affix the sensor and bracket to any flat surface in the rack or on the door.

Option D Mount the Sensor on the Rack Rails

To mount the sensor on the rails of any rack:

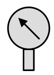
- Place the sensor in the factory-supplied bracket (see **Assemble the Sensor and Bracket**).
- Use the factory-supplied bracket and a standard panhead rack screw (not supplied) to mount the bracket on the rack rails.

Step 2 Connect the Sensor

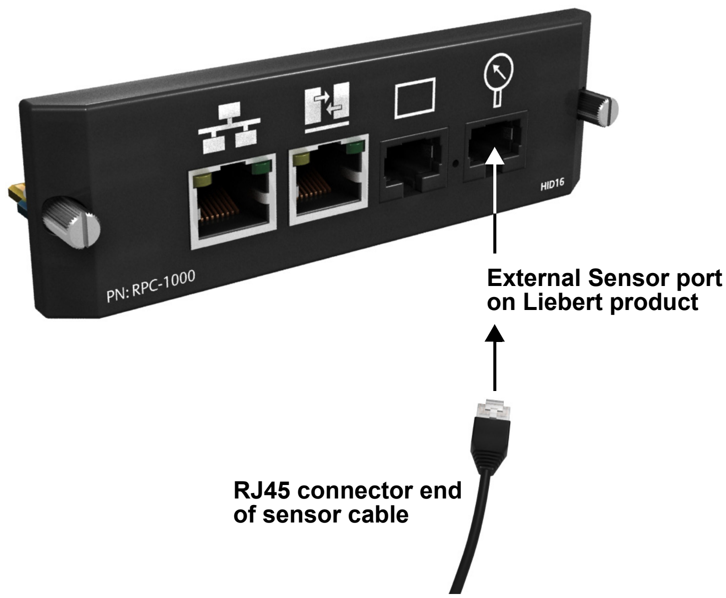
Each sensor is shipped with a cable to connect to the External Sensor port on your Liebert product.

To connect the sensor:

- After securely mounting the sensor (see **Step 1 - Mount the Sensor**), determine the location of the External Sensor port, identified by the icon shown below, on the Liebert product.

Icon	Description	Purpose
	External Sensor Port	Use this port **ONLY** to plug in optional sensor accessories.

- Insert the RJ45 connector end of the sensor cable into the External Sensor port on the Liebert product, as in the example shown below.



Step 3 Confirm the Connection

The connection must be acknowledged through the Web interface before the sensor may be monitored and managed. Refer to the user manual of your Liebert product for details.

Step 4 Configure Parameters

Also use the Web interface to configure the sensor parameters—for example:

- Assign a label for the sensor.
- Configure temperature or humidity thresholds to trigger warnings and alarms.

Refer to the user manual of your Liebert product for detailed instructions.

User Manuals

This guide is designed to give you the information needed to install a temperature or humidity sensor in a Liebert product.

Consult the user manual for your Liebert product for complete details on installing and configuring the sensor with that product.

User manuals for Liebert products are available online at **www.liebert.com**.

Emerson Network Power highly recommends that new users consult the user manual.

Liebert Rack PDU Family

Liebert SN temperature and humidity sensors are compatible with the Liebert Rack PDU family of products:

- The Liebert MPX™ is an Adaptive Rack PDU (power distribution unit) built with modular and scalable components that can be installed and reconfigured on-site to meet varying input and output power connectivity needs. The Liebert RPC™ (Rack PDU Card) is an optional accessory for the Liebert MPX, but is required for connecting the Liebert SN.
- The Liebert MPH™ is a single unit with fixed capacity, input and output. The Liebert RPC is factory-installed in the Liebert MPH.

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